

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) An acoustic wave transducer comprising:

an acoustic track comprising electrode fingers for different electrodes, the electrode fingers engaging to form exciting finger pairs, the acoustic track comprising marginal areas and an excitation area, the electrode fingers engaging in the excitation area, the marginal areas and the excitation area being located along a transverse direction of the acoustic wave transducer;

wherein a longitudinal phase speed of an acoustic wave in the acoustic track is less in a marginal area than in the excitation area;

wherein the acoustic wave is excitable and has a transversal basic mode;

wherein the following applies in the transversal basic mode for a wave number k_y :

$(k_y)^2 > 0$ in a marginal area, and

$(k_y)^2 < 0$ in an exterior area outside the acoustic track; and

wherein k_y is smaller in the excitation area than in the marginal areas and in the exterior area.

2. (Previously Presented) The acoustic wave transducer of claim 1, wherein k_y equals about zero in the excitation area.

3. (Previously Presented) The acoustic wave transducer of claim 1, wherein the excitation area comprises partial tracks in the transverse direction, the partial tracks corresponding to partial transducers that are interconnected in series and/or in parallel.

4. (Currently Amended) ~~The acoustic wave transducer of claim 3,~~ An acoustic wave transducer comprising:

an acoustic track comprising electrode fingers for different electrodes, the electrode fingers engaging to form exciting finger pairs, the acoustic track comprising marginal areas and an excitation area, the electrode fingers engaging in the excitation area, the marginal areas and the excitation area being located along a transverse direction of the acoustic wave transducer;

wherein a longitudinal phase speed of an acoustic wave in the acoustic track is less in a marginal area than in the excitation area;

wherein the acoustic wave is excitable and has a transversal basic mode;

wherein the following applies in the transversal basic mode for a wave number k_y :

$(k_y)^2 > 0$ in a marginal area, and

$(k_y)^2 < 0$ in an exterior area outside the acoustic track; and

wherein k_y is smaller in the excitation area than in the marginal areas and in the exterior area;

wherein the excitation area comprises partial tracks in the transverse direction, the partial tracks corresponding to partial transducers that are interconnected in series and/or in parallel;

wherein the partial tracks are substantially identical in a longitudinal direction, and at least two of the partial tracks have different widths; and

wherein the partial tracks have widths that adapt a transversal profile Ψ_y of an excitation strength in the excitation area to a shape Φ_y of the transversal basic mode.

5. (Previously Presented) The acoustic wave transducer of claim 4, in which the following applies for adapting the transversal profile Ψ_y of the excitation strength to the shape Φ_y of the transversal basic mode, where “y” corresponds to the transverse direction:

$$\int \Psi_y \Phi_y dy / \sqrt{\int \Psi_y^2 dy \cdot \int \Phi_y^2 dy} \geq 0,9 .$$

6. (Currently Amended) ~~The acoustic wave transducer of claim 3,~~ An acoustic wave transducer comprising:

an acoustic track comprising electrode fingers for different electrodes, the electrode fingers engaging to form exciting finger pairs, the acoustic track comprising marginal areas and an excitation area, the electrode fingers engaging in the excitation area, the marginal areas and the excitation area being located along a transverse direction of the acoustic wave transducer;

wherein a longitudinal phase speed of an acoustic wave in the acoustic track is less in a marginal area than in the excitation area;

wherein the acoustic wave is excitable and has a transversal basic mode;

wherein the following applies in the transversal basic mode for a wave number k_y :

$$\underline{(k_y)^2 > 0 \text{ in a marginal area, and}}$$

$(k_y)^2 < 0$ in an exterior area outside the acoustic track; and

wherein k_y is smaller in the excitation area than in the marginal areas and in the exterior area;

wherein the excitation area comprises partial tracks in the transverse direction, the partial tracks corresponding to partial transducers that are interconnected in series and/or in parallel;

wherein the partial tracks comprise a center partial track and marginal partial tracks;

wherein the marginal partial tracks are interconnected in series and form a series circuit;

wherein the series circuit is connected in parallel to the center partial track; and

wherein a width of the center partial track is greater than a width of a marginal partial track by at least a factor of five.

7. (Previously Presented) The acoustic wave transducer of claim 1, wherein the marginal areas each comprise a continuous metal strip in a longitudinal direction and have a transverse width of $\lambda_y/4$, where λ_y is a wavelength of the transversal basic mode in a corresponding marginal area.

8. (Previously Presented) The acoustic wave transducer of claim 1, wherein a number of electrode fingers per unit of length is greater in the marginal areas than in the excitation area.

9. (Previously Presented) The acoustic wave transducer of claim 1, wherein the electrode fingers for different electrodes define a periodic grid in the excitation area.

10. (Previously Presented) The acoustic wave transducer of claim 1, wherein the excitation area comprises unidirectionally radiating or reflecting cells in a longitudinal direction of the acoustic wave transducer; and

wherein electrode fingers in the excitation area that are adjacent in the longitudinal direction define a cell to radiate the acoustic wave in a specific direction or a cell with a reflecting effect.

11. (Previously Presented) The acoustic wave transducer of claim 1, wherein the acoustic track is a first acoustic track, and wherein the acoustic wave transducer further comprises:

at least one additional acoustic track comprising an excitation area and marginal areas, the at least one additional acoustic track being substantially identical to the first acoustic track, wherein the first acoustic track and the at least one additional acoustic track are substantially parallel; and

an intermediate area between acoustic tracks;

wherein widths of marginal areas of the acoustic tracks produce a wave number k_y in the intermediate area that is smaller by at least one order of magnitude than in the marginal areas and in exterior areas of the acoustic tracks; and

wherein a phase speed in excitation areas of different acoustic tracks and in the intermediate area is essentially same.

12. (Previously Presented) The acoustic wave transducer of claim 11, wherein a number of electrode fingers per unit of length in the intermediate area is essentially equal to a number of electrode fingers per unit of length in excitation areas of different acoustic tracks.

13. (Previously Presented) The acoustic wave transducer of claim 12, wherein electrode fingers in the intermediate area define a periodic grid.

14. (Previously Presented) The acoustic wave transducer of claim 1, wherein a width of a marginal area in the transverse direction is essentially $\lambda_y/4$, where λ_y is a wavelength of the transversal basic mode in a corresponding marginal area.

15. (Previously Presented) A filter comprising the acoustic wave transducer of claim 1.

16. (New) The acoustic wave transducer of claim 4, wherein the marginal areas each comprise a continuous metal strip in a longitudinal direction and have a transverse width of $\lambda_y/4$, where λ_y is a wavelength of the transversal basic mode in a corresponding marginal area.

17. (New) The acoustic wave transducer of claim 4, wherein a number of electrode fingers per unit of length is greater in the marginal areas than in the excitation area.

18. (New) The acoustic wave transducer of claim 4, wherein the electrode fingers for different electrodes define a periodic grid in the excitation area.

19. (New) The acoustic wave transducer of claim 6, wherein the marginal areas each comprise a continuous metal strip in a longitudinal direction and have a transverse width of $\lambda_y/4$, where λ_y is a wavelength of the transversal basic mode in a corresponding marginal area.

20. (New) The acoustic wave transducer of claim 6, wherein a number of electrode fingers per unit of length is greater in the marginal areas than in the excitation area.